

## Abstract 704

**TITLE:** Temporal trends in individuals' drug injection rates and histories of needle exchange program utilization

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**OBJECTIVES:** (a) To develop methods for identifying injection -drug users with accelerating injection rates so they might be referred to intensive counseling and substance abuse treatment; and (b) to analyze the association of changes in drug injection rates with use of needle exchange programs and sharing of needles and syringes.

**METHODS:** Data on drug use, enrollment in methadone maintenance, and demographic variables were obtained from 328 HIV -seronegative subjects who attended anywhere from 4 to 11 quarterly study visits. At each visit, subjects were interviewed, received HIV pre -test counseling and risk reduction counseling, and donated blood for HIV antibody testing. Subjects were recalled 2 weeks after each study visit to receive their HIV test results and associated counseling. Via intra-individual regression analyses and simple categorization rules we characterized by their histories of accelerating, decelerating, or stable drug injection rates. We also categorized subjects by their consistency of use of needle exchange programs (consistent, sporadic or non-user).

**RESULTS:** Among all 328 subjects, 52% had temporally decreasing rates of drug injection, 29% had stable rates, and 19% had increasing rates. Among the 128 who consistently reported using needle exchange programs, 30% had accelerating rates of drug injection, exceeding the 9% observed among non-users of needle exchanges, and the 17 % observed among sporadic users of needle exchanges. Multivariate logistic regression showed accelerating drug injection frequency to be significantly associated with consistent use of needle exchange programs. Cocaine use appeared to play a role in the increasingly frequent injection -drug use of some of these subjects. Among persons with accelerating drug injection frequencies, smaller percentages of consistent and sporadic needle exchange users reported needle sharing on the fourth study visit (18% and 14%, respectively) than did non-users of needle exchange programs (30%).

**CONCLUSIONS:** Persons with accelerating drug injection frequencies can be identified by sequential interviews and statistical analysis. These methods may be of value in identifying needle exchange users who would benefit from intensive counseling and drug treatment referrals. Although needle exchange programs attract some persons whose injection-drug habits are spiraling out of control, the present data suggest that the needle exchange programs may be helping these persons avoid infection with HIV and other blood borne pathogens.

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